

# **HAWAIIAN MONK SEAL FACT SHEET**

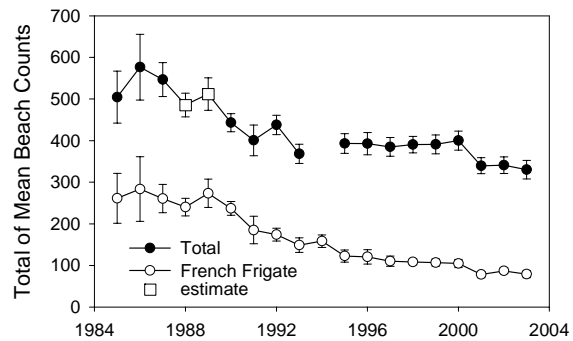
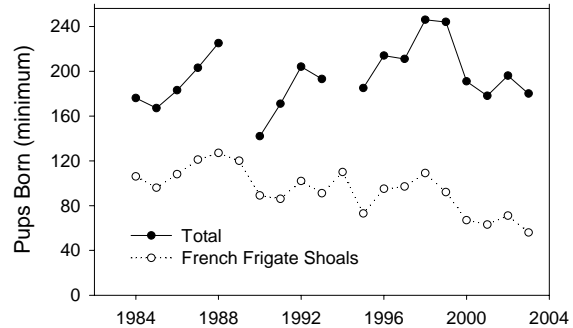
## **POPULATION STATUS**

### **Legal Status**

- The species was designated as depleted under the Marine Mammal Protection Act in 1976, following a 50% decline in beach counts from the late 1950s and mid 1970s.
- The species was also listed as endangered under the Endangered Species Act in 1976.
- Critical habitat was designated in 1988 from beaches to a depth of 20 fathoms (37 m) around breeding islands and at Maro Reef.

### **Distribution and Movement Patterns**

- Hawaiian monk seals are distributed among discrete populations at eight locations from Nihoa I. to Kure Atoll in the Northwestern Hawaiian Islands, a distance of 2000 km.
- A small number of individuals are seen in the main Hawaiian Islands and, over the past decade, births have been documented on all the main islands except Lanai.
- A few monk seals have been sighted at Johnston Atoll and a birth was documented in 1969.
- Approximately 90% of Hawaiian monk seals remain at their natal island for life; the remaining 10% move between or among major population centers.



### **Birth and Beach Count Trends**

- The annual number of births has varied substantially over the past decade (Fig. 1, top), but is expected to decline in the near future due to poor reproductive recruitment of females at French Frigate Shoals.
- The total of mean beach counts at all main sites declined by four to five percent per year from 1985 to 1993 (Fig. 1, bottom). Counts remained essentially unchanged for 7 years, but declined in 2001-2003. Further declines are likely due to high juvenile mortality. Total population size is about three times the beach count, because all seals are not on the beach at any one time.

## **NATURAL HISTORY**

### **Reproduction**

- Most pups are born between February and July, with a peak in April-May.
- Birth weight is 11 to 15 kg; normal weaning weight is 50 to 80 kg.
- Nursing time is 5-6 weeks, during which mothers do not eat.
- About 65% of all adult-sized females give birth each year, but birth rate can vary.
- Nursing pups are sometimes exchanged between females.
- Mating occurs in the water, and is rarely observed.
- Females give birth on beaches with adjoining shallow waters, which provide protection from sharks.
- Females give birth for the first time at five to ten years of age.

### **Longevity**

- Maximum age is believed to be 25-30 years, but few seals live this long.
- In the 1980s, pup and juvenile survival was high compared to other pinnipeds. Since that time, early survival rates have been lower.

### **Physical Description**

- Newborn pups are black; adults dark grey to brown dorsally, light grey to yellow-brown ventrally.
- Adults weigh 180 to 270 kg; adult females are thought to be slightly larger than adult males.

### **Feeding Patterns**

- Prey items include reef fishes, eels, cephalopods, and crustaceans.
- Most feeding appears to occur at depths less than 75 to 90 m (but seals occasionally dive to depths exceeding 500 m).

### **Social System**

- Monk seals are less gregarious than many species of seals; they do not aggregate in dense colonies.
- Males probably form a dominance hierarchy, with dominant males doing most of the breeding.

### **Causes of Mortality**

- Emaciation has been a major cause of death for juvenile seals, especially at French Frigate Shoals.
- Tiger sharks and Galapagos sharks are known to be predators of monk seals.
- Seals also become fatally entangled in marine debris.
- Diseases do not appear to be impeding population recovery, but our understanding of the role of disease is very limited. All wild seals carry parasites.
- Multiple-male aggression ("mobbing"), whereby groups of adult male seals kill adult females and younger animals of either sex, primarily at breeding islands where the number of adult males is significantly greater than the number of adult females.
- Single males sometimes mount, injure and/or drown pups.

## **CURRENT RESEARCH AND RECOVERY ACTIVITIES**

### **Research**

- Population monitoring includes study of reproduction, survival, number of seals at each site, sources of injury and death, and behavior.
- Research is conducted on male aggression and dominance.
- Studies examine the role of shark predation on pup survival.
- Foraging studies are focused on determination of monk seal prey, and diving depths and locations.
- An epidemiological survey and foraging behavior study is being conducted in the main Hawaiian Islands.

### **Recovery activities**

- Undersized female pups from French Frigate Shoals were rehabilitated for release into the wild to enhance populations at Kure and Midway Atolls until 1995.
- Each year, debris is removed from the islands and seals are released from entangling debris.
- Males have been translocated to balance adult sex ratios and decrease multiple-male aggression.
- Weaned pups have been translocated within French Frigate Shoals to enhance survival.
- A small number of Galapagos sharks predating on seal pups have been removed.
- In 1991, a Protected Species Zone was established by the Western Pacific Regional Fisheries Council to reduce the probability of direct interactions of seals with fisheries in the Northwestern Hawaiian Islands.
- Since 1998, a multi-agency reef clean-up effort led by NMFS has removed tons of derelict nets, lines and other potential entanglement hazards from coral reef habitats of the Hawaiian monk seal.

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